LESSON 4.5

NAME _____ DATE _____

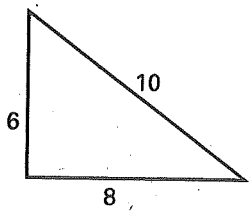
Practice A

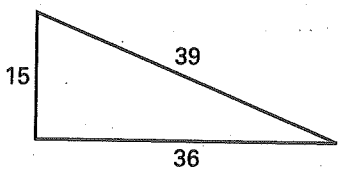
For use with pages 199–205

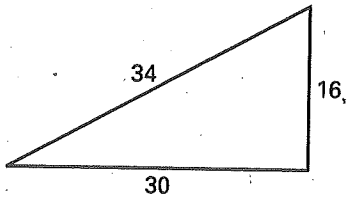
Supply the missing symbol of equality or inequality to complete the statement.

1. In $\triangle ABC$ with longest side c: If c^2 ? $a^2 + b^2$, then $\triangle ABC$ is acute.
2. In $\triangle ABC$ with longest side c: If c^2 ? $a^2 + b^2$, then $\triangle ABC$ is right.
3. In $\triangle ABC$ with longest side c: If c^2 ? $a^2 + b^2$, then $\triangle ABC$ is obtuse.

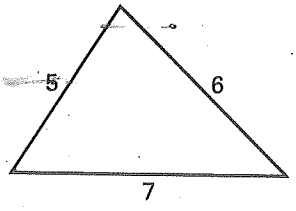
Show that the triangle is a right triangle.

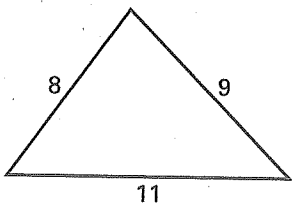
4. 

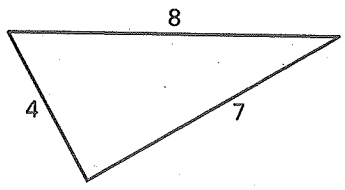
5. 

6. 

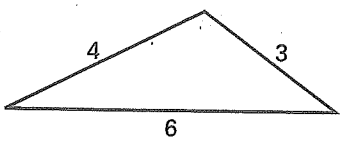
Show that the triangle is an acute triangle.

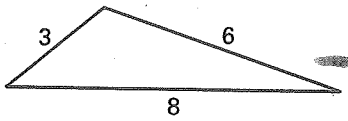
7. 

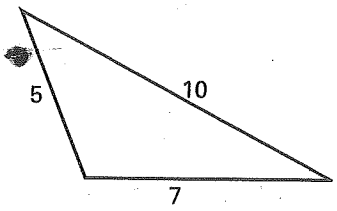
8. 

9. 

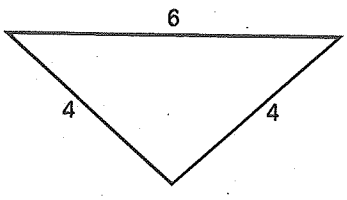
Show that the triangle is an obtuse triangle.

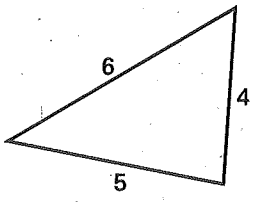
10. 

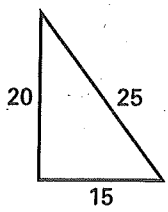
11. 

12. 

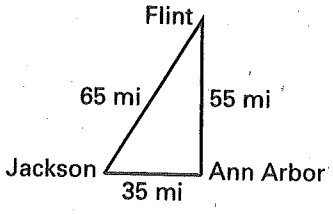
Classify the triangle as *acute*, *right*, or *obtuse*.

13. 

14. 

15. 

16. The diagram at the right shows the distances between three cities in the state of Michigan. Jackson is directly west of Ann Arbor. Is Flint directly north of Ann Arbor? Explain your answer.



LESSON 4.5

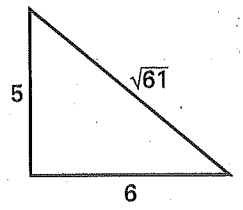
NAME _____ DATE _____

Practice B

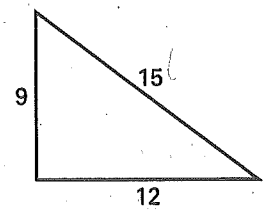
For use with pages 199–205

Verify that the triangle is a right triangle.

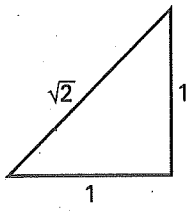
1.



2.

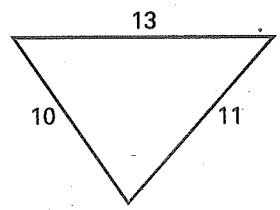


3.

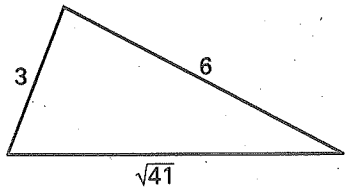


Verify that the triangle is an acute triangle.

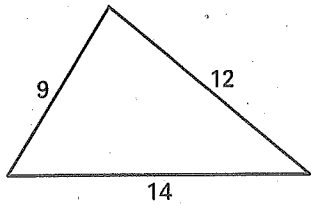
4.



5.

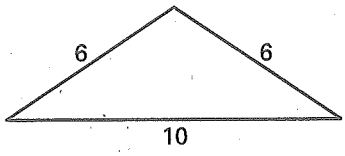


6.

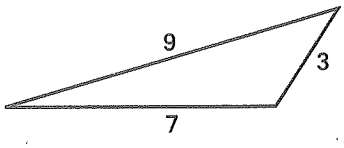


Verify that the triangle is an obtuse triangle.

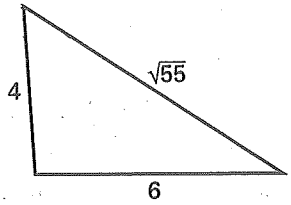
7.



8.



9.



Classify the triangle with the given side lengths as *acute*, *right*, or *obtuse*.

10. 8, 10, 11

11. 2, 5, 6

12. 3, 8, $\sqrt{73}$

13. 12, 13, 17

14. 8, 15, 17

15. 4, 4.5, 7

16. You are making a birdhouse. The peak of the roof should be at a right angle. The roof of the birdhouse does not fit onto the house correctly. Compare peak angles in the drawings below to determine how to fix the problem.